appendix B

Geodatabase Design Schema
GEODATABASE DESIGN SCHEMA

The goal of the San Diego Region Aggregate Study geodatabase is to provide a comprehensive inventory of geologic and geographic information for the San Diego region in support of the Aggregate Study. The Aggregate Study geodatabase is developed using Environmental Systems Research Institute (ESRI) ArcGIS 9.3.1 software. The geologic and geographic information are represented as feature classes in the geodatabase. Related feature classes are grouped together in a feature dataset. There are five feature datasets containing twelve features classes and one reference table in the San Diego Region Aggregate Study geodatabase. Figure 1 provides a summary of the geodatabase structure. The detail graphical diagram of the geodatabase schema is shown in Figure 2.

All dataset are projected in California State Plane Zone 6, NAD 1983.

The properties of the five feature datasets of the Aggregate Study geodatabase and their feature classes are listed below.

GEOLOGY FEATURE DATASET

- **Feature Class: Geologic_Unit**
  
The Geologic_Unit feature class contains the boundaries of geologic units. This information was extracted from various U. S. Geological Survey (USGS) Geologic Map 7.5’ Quadrangles. Attributes of this feature class are:
  
  **Geologic_Unit**: Geologic Unit; an identifiable part of the earth based on some geologic criteria. A geologic unit is typically a body of material (rock or nonconsolidated).
  
  **Quad_Name**: USGS Quad name

- **Feature class: Fault**
  
The fault feature class contains the fault locations in the San Diego region. Attributes of this feature class are:
  
  **Fault_ID**: Unique Fault ID
  
  **Fault_Name**: Fault Name
  
  **Movement**: fault Movement

- **Feature Class: USGS_Quads**
  
The USGS_Quads feature class contains the USGS 7.5 Quadrangle Boundaries. Attributes of this feature class are:
  
  **QUAD75**: USGS 15-minute quad number plus a digit representing the quadrant of the 15-minute quad
  
  **NAME**: quad name
  
  **QUAD15**: USGS 15-minute quad number

- **Table**: Geologic_Unit_info
  
  This table contains the full description for each geologic unit. The description was imported from each USGS 7.5’ Quad.
MINERAL RESOURCE FEATURE DATASET

**Feature Class: Mines**

The Mines features class shows locations of aggregate mines in California. The source of this feature class is Department of Conservation, Office of Mine Reclamation, State of California. Attributes of this feature class are:

- **Mine_Name**: Name of the mine
- **Operator_N**: Name of the operator of the mine
- **Operator_S**: Address of the operator of the mine
- **Operator_C**: City of the operator of the mine
- **Operator_1**: State of the operator of the mine
- **Operator_Z**: Zip code of the operator of the mine
- **Primary_Co**: Primary commodity produced by the mine

**Feature Class: MRZ**

The MRZ feature class contains four mineral resource zones in the western San Diego County classified by Department of Conservation, State Mining and Geology Board. Attributes of this feature class are:

- **MRZ_ID**: Unique MRZ ID
- **MRZ**: Mineral resource zone number.

Land Use Feature Dataset

**Feature Class: Landuse**

The Landuse feature class shows the 2008 land use, public ownership by parcel for the San Diego region. This feature class is downloaded from SANDAG Land Information System (LIS). Attributes of this feature class are:

- **lu**: SANDAG land use code
- **Landuse**: SANDAG land use type

**Feature Class: Planned_Landuse**

The Planned_Landuse shows the planned land use for the series 11 (2030) Regional Growth Forecast for the San Diego Region. This feature class is downloaded from SANDAG Land Information System (LIS).

- **plu**: SANDAG planned land use code
- **Landuse**: SANDAG planned land use type
TRANSPORTATION FEATURE DATASET

**Feature Class: hwycov**

The hwycov feature class includes existing and planned freeways, toll lanes, HOV lanes, managed lanes, ramps, surface streets classified on general plan circulation elements, and some local roads needed for network connectivity. This feature class is downloaded from SANDAG Transportation Model. Attributes of this feature class are:

- **FNODE#:** ESRI-assigned FROM node number
- **TNODE#:** ESRI-assigned TO node number
- **LPOLY#:** ESRI-assigned left polygon number
- **RPOLY#:** ESRI-assigned right polygon number
- **LENGTH:** Length of link in feet
- **HWYCOV_:** ESRI-assigned link ID
- **HWYCOV_ID:** SANDAG-assigned link ID
- **NM:** Street name
- **FXNM:** Cross street name at the FROM end of the link
- **TXNM:** Cross street name at the TO end of the link
- **AN:** A node number
- **BN:** B node number
- **PKPCT:** Peak hour percentage
- **TRPCT:** Truck percentage
- **DIR:** Link direction
- **FFC:** Federal functional class
- **CLASS:** Arterial class for level of service class
- **ASPD:** Adjusted (during calibration) link speed
- **IYR:** The year the link opened to traffic
- **IPROJ:** Project number for use with hwuproj.xls
- **IJUR:** Link jurisdiction type
- **IFC:** Initial functional classification
- **IHOV:** Link operation type
- **ISPD:** Posted speed limit
- **IWAY:** One or two way operations
- **IMED:** Median type

**Feature Class: RTP_2030_cov**

The RTP_2030_arc feature class includes freeway network for the 2030 San Diego Regional Transportation Plan (RTP) based on the reasonably expected revenue scenario. This feature class is a single line coverage that combines the lane attributes for both directions. Attributes of this feature class are:

- **FNODE#:** ESRI-assigned FROM node number
- **TNODE#:** ESRI-assigned TO node number
- **LPOLY#:** ESRI-assigned left polygon number
RPOLY#: ESRI-assigned right polygon number
LENGTH: Length of link in feet
NM: freeway name
LN: Proposed number of lane addition

ENVIRONMENTAL FEATURE DATASET

**Feature Class: Conserved_land**

The feature class contains lands where conservation occurs through public or private acquisitions, conservation easements, land dedications, mitigation, mitigation banks, covenants, or other mechanisms that ensure the land will be not be developed. Attributes of this feature class are:

- Land_ID: Unique conserved land ID
- Jurisdiction: Jurisdiction
- ConsType: Conserved Type
- GenOwner: General Owner
- PropertyName: Property Name
- OwnName: Owner Name
- Status: Conserved Status
- ConsDate: Conserved Date
- MgmtResp: Management Responsibility
- MgmtAgency: Management Agency
- LandMgmtPlan: Land Management Plan
- Information Source: Information Source
- EnterDate: Data Enter Date
- ModifyDate: Data Modify Date
- Park: Park or not a park
- APN_8: American Parcel Number 8 digits
- PARCELID: Parcel ID
- MgmtPlanDate: Management Plan Date
- MgmtPlanFunding: Management plan funding
- MgmtPlanFundType: Management funding type
- ContactName: Contact name
- ContactAddress: Contact Address
- ContactPhone: Contact Phone
- ContactEMail: Contact email

**Feature Class: MSCP_N-Version8**

This feature class includes the draft designations of the North County of San Diego's Multiple Species Conservation Program South County Subregional Plan. Attributes of this feature class are:

- ID: Unique ID
- Category: North County MSCP Designation Categories
Feature class: SMSCP_MHCP_Preserve

This feature class includes the habitat preserve planning areas for approved NCCP Subregional Plans. Approved NCCP Subregional Plan include: the Multiple Species Conservation Program (MSCP) - South County Subarea approved in 1997 and the Multiple Habitat Conservation Program (MHCP) approved in 2003. Attributes of this feature class are:

HABPRES: Indicating the percentage of lands that will be conserved and managed for biological resources
TYPE: Habitat preserve type
**Figure 1**

**Summary of Aggregate Geodatabase Structure**
(San Diego Region Aggregate Supply Study Geodatabase Quick Glance)

- **Geology Feature Dataset**
  - Polygon feature class: Geologic_Unit
    - boundaries of geologic units
  - Line feature class: Fault
    - fault locations
  - Polygon feature class: USGS_Quad
    - boundaries of USGS Quadrangles
  - Table: Geologic_Unit_info
    - full description for each geologic unit

- **Environmental Feature Dataset**
  - Polygon feature class: Conserved_Land
    - conserved lands
  - Polygon feature class: NSCP_N_Ver06
    - the draft designations of the North County of San Diego's Multiple Species Conservation Program
  - Polygon feature class: SMSCP_NHCP_Preserve
    - the habitat preserve planning areas for approved NCCP Subregional Plans

- **Mineral Resource Feature Dataset**
  - Point feature class: Mines
    - locations of aggregate mines
  - Polygon feature class: MRZ
    - boundaries of mineral resource zones

- **Transportation Feature Dataset**
  - Line feature class: HWY_2030
    - existing and planned freeways, surface street, and local roads network
  - Line feature class: RTP_2030_cov
    - freeway network for the 2030 San Diego Regional Transportation Plan (RTP) base on the reasonably expected revenue scenario

- **Land Use Feature Dataset**
  - Polygon feature class: Landuse
    - 2008 land use
  - Polygon feature class: Planned_Landuse
    - planned land use
Figure 2
San Diego Region Supply Study Geodatabase Schema Diagram
(Geodatabase: SD_Aggregate.mdb, Date generated: Friday, July 31, 2009)